Contents of Vol. 157

ELECTRONICS AND OPTICS

Optical properties and dielectric function of manganese telluride thin films 1
J. Oleszkiewicz, A. Kisiel (Cracow, Poland) and S. A. Ignatowicz (Warsaw, Poland)

Thermoelectric power of indium tin oxide films 7
J. Trefny and N. Mitra (Golden, CO, U.S.A.)

Time domain responses of the $Al/Dy_2O_3/Al$ thin film capacitors and their a.c. characteristics . . . 13
T. Wiktorczyk, K. Nitsch and Z. Bober (Wrocław, Poland)

Preparation and properties of resistive films 21
K. K. Shih, A. Aviram and C. R. Guarnieri (Yorktown Heights, NY, U.S.A.)

Optical absorption and hydrogen content of plasma-deposited carbon films 29
F. M. El-Hossary, D. J. Fabian (Glasgow, U.K.) and C. J. Sofield (Didcot, U.K.)

Light intensity dependence of photodarkening in amorphous As_2S_3 films 35
K. Tanaka, (Sapporo, Japan)

METALLURGICAL AND PROTECTIVE COATINGS

A study of the adhesion of vacuum-evaporated polyethylene films to aluminium 43
D. Bekiarov, B. Pashmakov, E. Vateva and C. Alexieva (Sofia, Bulgaria)

Effect of a temperature gradient on arsenic diffusion in silicon 49
A. Feygenson (Reading, PA, U.S.A.) and J. N. Zemel (Philadelphia, PA, U.S.A.)

PREPARATION AND CHARACTERIZATION

Investigation of the porosity of thin anodic Al_2O_3 films by interference of photoluminescence radiation 59
Lj. D. Zeković, B. R. Jovanić, Lj. Ristovski, G. Davidović-Ristovski and V. V. Urošević (Belgrade, Yugoslavia)

Preparation and characterisation of Langmuir–Blodgett films of mesoporphyrin IX dimethylester indium chloride 69
S. Y. Luk, F. R. Mayers and J. O. Williams (Manchester, U.K.)

Thin palladium films prepared by metal–organic plasma-enhanced chemical vapour deposition . . 81
E. Feurer and H. Suhr (Tübingen, F.R.G.)

Potentiostatic electrodeposition of cuprous oxide 87
A. E. Rakhshani and J. Varghese (Safat, Kuwait)

Plasma deposition of amorphous hydrogenated carbon films on III–V semiconductors 97
J. J. Pouch, J. D. Warner, D. C. Liu and S. A. Alterovitz (Cleveland, OH, U.S.A.)

Laser-induced chemical vapour deposition and characterization of amorphous silicon oxide films 105
J. Shirafuji, S. Miyoshi and H. Aoki (Osaka, Japan)

Effect of mixing ions on the formation process of β-SiC fabricated by ion beam mixing 117
T. Kimura, H. Yamaguchi, J.-K. Luo, S. Yugo, Y. Adachi (Tokyo, Japan) and Y. Kazumata (Ibaraki, Japan)

Silicon dioxide films prepared by spin-on solutions 129
M. Kuisl (Ulm, F.R.G.)

High temperature stability of plasma-enhanced chemically vapour deposited titanium silicide due to two-step rapid thermal annealing 135
T. Hara, Y. Ishizawa (Tokyo, Japan), D. G. Hemmes and R. S. Rosler (Phoenix, AZ, U.S.A.)

Low temperature growth of AlN and Al_2O_3 films by the simultaneous use of a microwave ion source and an ionized cluster beam system 143
H. Takaoka, J. Ishikawa and T. Takagi (Kyoto, Japan)

Electrodeposition of $CuInSe_2$ films from a sulphate bath 159
Y. Ueno, H. Kawai, T. Sugiura and H. Minoura (Gifu, Japan)

GENERAL FILM BEHAVIOUR

Study of sputtered ZnO–Pd thin films as solid state H_2 and NH_3 gas sensors 169
S. P. S. Arya, A. D'Amico and E. Verona (Rome, Italy)

ELECTRONICS AND OPTICS

HgCdTe thin films for solar cells application prepared by multisource evaporation. 175
N. Romeo, V. Canevari, L. Zini and C. Spaggiari (Parma, Italy)

Propriétés électriques des couches minces d'In_2O_3 préparées par oxydation postérieure de métal évaporé 181
S. Noguchi and H. Sakata (Yokohama, Japan)

Optical and electrical properties of deposited films of Si(phthalocyaninato)$(OH)_2$ 189
M . Yudasaka (Yokohama, Japan), Y. Kuwae (Kanagawa, Japan), M. Kawai (Saitama, Japan), N. Nakanishi and S. Kurita (Yokohama, Japan)

METALLURGICAL AND PROTECTIVE COATINGS

Correlation of process and system parameters with structure and properties of physically vapour-deposited hard coatings 195
D. S. Rickerby and P. J. Burnett (Didcot, U.K.)

Intermixing of Co/Gd_xO_y thin films on kapton polyimide 223
K. Shanker, J. R. MacDonald (Guelph, Ontario, Canada) and T. C. Chan (London, Ontario, Canada)

The scratch adhesion test: an elastic–plastic indentation analysis 233
P. J. Burnett and D. S. Rickerby (Didcot, U.K.)

Variations in the reflectance of TiN, ZrN and HfN 255
A. J. Perry (Troy, MI, U.S.A.), M. Georgson (Uppsala, Sweden) and W. D. Sproul (Des Plaines, IL, U.S.A.)

PREPARATION AND CHARACTERIZATION

REVIEW PAPER

Preparation, properties and applications of boron nitride thin films 267
S. P. S. Arya (Rome, Italy) and A. D'Amico (L'Aquila, Italy)

Quantitative X-ray fluorescence analysis of single-layer and multilayer thin films 283
T. C. Huang (San Jose, CA, U.S.A.)

Étude des propriétés de couches minces de sélénium hexagonal dopées au chlore 291
K. Napo, J. C. Bernède, G. Safoula, P. Burgaud and A. Ameziane (Nantes, France)

Uniform composition Te–Se film preparation from alloy sources. 307
R. Chiba and N. Funakoshi (Ibaraki, Japan)

Morphology and structure of gold, silver and copper layers obtained by sputtering during ion bombardment of targets from these metals 315
M. Marinov (Sofia, Bulgaria)

Quantitative X-ray fluorescence analysis of boron in thin films of borophosphosilicate glasses . . 325
M. Schuster (Munich, F.R.G.), L. Müller, K. E. Mauser and R. Straub (Karlsruhe, F.R.G.)

Regularities of growth and electrical properties in the plasma-enhanced deposition of silicon nitride 337
L. N. Aleksandrov, I. I. Belousov and V. M. Efimov (Novosibirsk, U.S.S.R.)

Growth and characterization of indium telluride thin films 345
R. Rousina and G. K. Shivakumar (Gujarat, India)

X-ray photoelectron spectroscopy of O 1s and Si 2p lines in films of SiO_x formed by electron beam evaporation 351
Y. N. Sun, A. Feldman and E. N. Farabaugh (Gaithersburg, MD, U.S.A.)

AUTHOR INDEX 361